The Washington State Hazard Mitigation Plan is the product of thousands of hours of work and the effort of people from many organizations. The plan built upon a number of mitigation planning initiatives that had taken place since 1990, rather than starting from a clean sheet of paper.

Staff from the Mitigation Section of the Washington Military Department's Emergency Management Division (hereafter called the State Emergency Management Division) led the development effort of the new state plan. The staff conducted the bulk of the research and writing of plan drafts, worked with state agencies and assisted them with development of their annexes to this plan, reviewed local plans for information to include in state plan, convened meetings of State Hazard Mitigation Advisory Team, managed the plan review process, and facilitated adoption of the plan by the Governor. Additionally, the division's Analysis and Plans Section assisted with development and analysis of the state agency facilities database and identification of at-risk facilities. The division's Hazard Mitigation Strategist led and directed this planning effort.

Background of Hazard Mitigation Planning

A number of planning initiatives since 1990 have heavily emphasized hazard mitigation, and they provided the foundation for the Washington State Hazard Mitigation Plan. These planning initiatives included:

- A Policy Plan for Improving Earthquake Safety in Washington, December 1991.
 Legislation established the Seismic Safety Advisory Committee in 1990 and
 directed it to develop a plan for improving the state's earthquake preparedness.
 This plan assessed and made recommendations on the adequacy of
 communication systems, structural integrity of public buildings to include
 hospitals and public schools, and prioritized measures to improve the state's
 earthquake readiness.
- Washington State Wind Mitigation Report and Action Plan, May 1994. This
 report made recommendations to strengthen the state's mitigation efforts against
 high winds. It was developed following the Inauguration Day windstorm disaster
 of January 20, 1993.
- Washington Wildfire Mitigation Plan 1994. This plan addressed issues relating to the prevention and mitigation of damage from interface wildfire while maintaining a strong awareness of wildfire prevention.
- Washington State Flood Damage Reduction Plan, July 1995. The plan served as a vehicle for coordination between state, local and federal jurisdictions identifying risk and reducing vulnerability to flood damage. It identified state wide flood damage reduction goals and objectives.
- Washington State Hazard Mitigation Strategy, January 2000. This document was promulgated in January 2000 as the state's hazard mitigation plan required

by Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended. The strategy combined findings and recommendations from previous planning efforts, and identified mitigation goals, objectives and recommendations for state mitigation initiatives. It provided a framework to increase public awareness of the risk posed by all natural hazards, to reduce the risk of loss of life, injuries, economic costs and the disruption of families and communities caused by hazards.

- Nisqually Earthquake Hazard Mitigation Survey Team Report, February 2002.
 This report identified actions to reduce the potential for future earthquake losses using sustainable methods. It built on information and strategies presented in an early implementation report published shortly after February 28, 2001 earthquake, and provided information and direction for future revisions of the Washington State Hazard Mitigation Strategy.
- Seismic Safety Committee Policy Recommendations, 2002. The Seismic Safety Committee of the state Emergency Management Council examined progress made since the 1991 plan for improving earthquake safety, and developed a new set of recommendations for implementing the remainder of the 1991 plan and to address findings made after the February 2001 Nisqually earthquake.

These plans and documents were reviewed, and their recommendations taken into consideration during the development of this state plan.

State Hazard Mitigation Advisory Team

The Mitigation Section of the State Emergency Management Division assembled and convened the State Hazard Mitigation Advisory Team to provide guidance and assist with development of the State Hazard Mitigation Plan. Once the state plan is completed, adopted by the Governor, and approved by the Federal Emergency Management Agency, the Team will function as an advisor to the State Hazard Mitigation Strategist on hazard mitigation efforts, including review and revision of the state plan.

The purpose of the State Hazard Mitigation Advisory Team is to:

- Assist with preparing the State Hazard Mitigation Plan.
 - Assist with development of profiles of natural hazards and of geographic regions of the state.
 - Review previous hazard mitigation planning, and identify progress made on actions recommended in 2000 and 2002 hazard mitigation strategies.
 - Develop updated goals, objectives and strategies for the new State Hazard Mitigation Plan.
 - Assist with development of plan maintenance process.
- Provide ongoing monitoring of the hazard mitigation efforts after adoption and FEMA approval of the state plan.

• Assist in the annual review of the State Hazard Mitigation Plan, and in the revision of the plan every three years.

Members of the team provided a variety of expertise and perspective to the planning process, including emergency management, natural hazards, land-use planning, building codes, transportation, and infrastructure. Most members are from state agencies. Members are:

State Hazard Mitigation Advisory Team

Representing / Expertise	Name, Organization
State Hazard Mitigation Strategist	Mark Stewart, State EMD (team convener)
State Hazard Mitigation Officer	Marty Best, State EMD
Hazard Mitigation Section Manager	Chuck Hagerhjelm, State EMD
Local Emergency Managers	Timothy Doyle, King County EM; and Claudia Ellsworth, Pierce County EM
Growth Management / Land-Use Planning	Leonard Bauer, Department of Community Trade and Economic Development, Growth Management Division
Building Codes	Tim Nogler, State Building Code Council.
Transportation	Terry Simmonds and Tim D'Acci, Department of Transportation
Lifelines (water / power utilities, pipelines)	Doug Kilpatrick, Utilities and Transportation Commission
Telecommunications	Don Miller, State EMD
Information Services	Scott Chapman, Department of Information Services
State Facilities / Infrastructure	Andy Stepelton, Department of General Administration
Public Health	Greg Staley and Ken Back, Department of Health
Geologic Hazards	Tim Walsh, Department of Natural Resources, Division of Geology and Earth Resources
Wildfire Hazard	Jennifer Flemister, Department of Natural Resources, Resource Protection Division
Flood Hazard	Dan Sokol, Department of Ecology
Geographic Information Systems	Allen Jakobitz, State EMD
National Weather Service	Ted Buehner, Seattle Forecast Office
Insurance	Joan Scofield, State Office of the Insurance Commissioner
Federal Emergency Management Agency (ex-officio)	Lois Lopez, FEMA Region 10

The State Hazard Mitigation Advisory Team met several times during the development of the State Hazard Mitigation Plan:

• September 2002 – This was the first meeting of the team. It was oriented to the new planning requirements and structure of state plan, and presented with a

consolidated set of goals, objectives and recommended actions from previous hazard mitigation planning initiatives to review.

- January 2003 The team began review of previous mitigation planning and recommended mitigation actions identified in those efforts.
- February 2003 The team completed review of previous mitigation planning efforts, noting accomplishments of previously identified actions, and developed a list of potential mitigation actions to consider carrying forward in the new state plan.
- April 2003 The team reviewed the first draft of the state plan's hazard profiles and provided recommendations to improve and solidify the profiles.
- June 2003 The team reviewed the first draft of regional socioeconomic profiles for the state plan's risk assessment and began discussing potential mitigation initiatives for identified at-risk populations.
- November 2003 The team reviewed the plan's full risk assessment and state agency planning; discussed and decided upon which natural hazards to consider as priorities to address based on human, property, and societal impacts; and developed the plan's initial mitigation strategy with goals, objectives, and recommended actions and initiatives.
- February 2004 The team met via conference call to finalize the state plan's mitigation strategy goals, objectives, and recommended actions and initiatives, and recommend taking the plan to the Governor's Emergency Management Council.

Governor's Emergency Management Council

The 17-member Emergency Management Council advises the Director of the Military Department, The Adjutant General, and the Governor on all matters pertaining to state and local emergency management, according to state law [RCW 38.52.040]. The Council represents city and county government, sheriffs and police chiefs, the Washington State Patrol, the Military Department, the Department of Ecology, state and local fire chiefs, seismic safety experts, state and local emergency management directors, search and rescue volunteers, medical professions who have expertise in emergency medical care, building officials, and private industry. Under state law, the Council develops recommendations to the Governor for improvement of emergency management practices, and provides the Governor an annual assessment of statewide emergency preparedness that includes specific progress on hazard mitigation and reduction efforts.

The Council in September 2003 received an orientation to the hazard mitigation planning requirements and a briefing on progress on development of the state plan. In

March 2004, the Council reviewed the planning process, reviewed and provided feedback on the state plan's mitigation strategy, and recommended the Governor adopt the plan. Changes to the mitigation strategy recommended by the Council were made, as appropriate.

State Agency Participation in the Washington State Hazard Mitigation Plan

Participation of state agencies was critical in the development of the state plan. As of this writing, 31 state agencies participated by identifying potential vulnerable facilities and writing agency-specific annexes to address their vulnerabilities through mitigation actions and initiatives. Additionally, these agencies reviewed and adopted the full state plan prior to its submission to the Governor for adoption (*note: this process will be complete before the state plan is submitted for final approval*).

Agencies that participated in development of the state plan are:

State Agencies Participating in State Hazard Mitigation Plan

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Agency	Planning Leader
Department of Agriculture	James Wood
Office of the Attorney General	Le Perry
Big Bend Community College**	Ken Turner
Department of Employment Security	Arthur Florence
Environmental Hearing Office	Robyn Bryant
Everett Community College	George Olson
Department of General Administration**	Andy Stepelton
Department of Health	Greg Staley
Higher Education Coordinating Board	Joann Wiszmann
Department of Information Services**	Mary Beth Sweeten
Department of Labor and Industries	Valerie Gray
Department of Licensing	John Reda
Liquor Control Board	Randy Simmons
Marine Employees Commission	Kathy Marshall
Military Department	John Lindstrom
Office of Financial Management**	Robin Campbell
Office of the Forecast Council	Desiree Monroy
Office of the Insurance Commissioner	Joan Scofield
Department of Revenue	Linda Allen
State School for the Blind	Rob Tracey

State Agencies Participating in State Hazard Mitigation Plan

Agency	Planning Leader
State School for the Deaf**	Dave Turpen
Seattle Central Community College**	Jeff Watts
Department of Social and Health Services	Solomon Uwadiale
South Puget Sound Community College	Tony Simone
State Auditors Office	Carol Andrews
State Patrol	Sgt. Wes Stockwell
University of Washington	Elenka Jarolimek
Utilities and Transportation Commission	Doug Kilpatrick
Department of Veteran's Affairs**	April Harris
Washington Horse Racing Commission	Robert Lopez
Western Washington University	Gayle Shipley

^{** -} Agency annex still under development as of April 2004.

These state agencies became partners in the state plan following a concerted effort by the Mitigation Section of the Washington Emergency Management Division to engage agencies in the planning effort. The Mitigation Section made the following efforts to foster participation in the state plan:

- Drafted a letter sent in September 2002 by The Adjutant General of the Washington Military Department to about 90 state agencies, colleges and universities describing new hazard mitigation planning requirements and planning options available to agencies.
- Made presentations to state agency liaisons in July 2002 (describing planning requirements and options), January 2003 (discussing critical facilities identification), and September 2003 (providing update on planning progress and facilities identification).
- Developed and made available in January 2003 a planning guide outlining agency participation in the state plan and requirements for agency annexes to the state plan. The planning guide provided instructions on how to identify potentially at-risk facilities, where to obtain additional information on facilities necessary for the risk assessment for the state plan, and how to develop actions and initiatives to mitigate vulnerabilities they found.
- Developed a facilities database that agencies then used to prepare their annexes.

- Conducted planning workshop for state agencies in February 2003 to describe the planning requirements, provide instruction for developing annexes, and to answer questions about expectations.
- Provided technical assistance as state agencies developed information on their facilities for the state plan's risk assessment and wrote their annexes for the state plan. This included reviewing draft annexes and providing feedback for improvements.

The 31 participating state agencies – and another 14 state agencies with emergency management liaisons – reviewed and commented on a summary of the state plan in February 2004. Comments were reviewed and incorporated, as appropriate, into the state plan. In May 2004, participating state agencies were asked to adopt the revised state plan via letter from executive staff or governing boards or commissions; letters of adoption are included as part of the agency annexes to the plan (note: this process is ongoing and will be complete before the state plan is submitted for final approval).

Review of Hazard Profiles

To ensure the accuracy and completeness of information on hazards, validate criteria to identify local jurisdictions most vulnerable to each hazard, and ensure conformity to federal hazard mitigation planning requirements, each Hazard Profile was subject to a thorough review. The State Management Division's Mitigation Section directed and managed the review process. Staff from the division as well as members of the State Hazard Mitigation Advisory Team read and provided comments on early drafts of the profiles. Additionally, teams of hazard experts from a variety of state and federal organizations conducted a final review of each profile.

Participating experts, by hazard, are listed below:

Avalanche

Mark Moore, Forecaster, Northwest Weather and Avalanche Center.

Drought

- Linda Crerar, Natural Resource Policy Assistant to Director, Washington Department of Agriculture.
- Doug McChesney, Policy and Planning Manager, Water Resources Program, Washington Department of Ecology.
- Rebecca Inman, Environmental Specialist, Water Resources Program, Washington Department of Ecology.
- Mark Clark, Executive Director, Washington Conservation Commission.

Earthquake

- Chris Jonientz-Trisler, Natural Hazard Program Specialist/Earthquake Program Manager, FEMA Region 10.
- Tim Walsh, Chief Geologist, Washington Department of Natural Resources.

 Craig Weaver, Seismologist and Pacific Northwest Coordinator, National Earthquake Program, U.S. Geological Survey.

Flood

- Dan Sokol, Floodplain Management Specialist and Acting National Flood Insurance Program State Coordinator, Washington Department of Ecology.
- Chuck Steele, Floodplain Management Specialist, Northwest Region, Washington Department of Ecology.
- Brent Bower, Hydrologist, National Weather Service, Seattle Forecast Office.
- Paul Komoroske, Emergency Management Coordinator, U.S. Army Corps of Engineers, Seattle District.

Landslide

- Tim Walsh, Chief Geologist, Washington Department of Natural Resources.
- Ed Harp, Geologist and Emergency Response Coordinator, National Landslide Hazard Program, U.S. Geological Survey.
- Dave Montgomery, Professor, Department of Earth and Space Sciences, University of Washington.

Severe Storm

- Ted Buehner, Warning Coordination Meteorologist, National Weather Service, Seattle Forecast Office.
- Jeff Rood, Meteorologist, National Weather Service, Seattle Forecast Office.
- Tyree Wilde, Warning Coordination Meteorologist, National Weather Service Portland, OR, Forecast Office.
- Ken Holmes, Warning Coordination Meteorologist, National Weather Service Spokane Forecast Office.
- Dennis Hull, Warning Coordination Meteorologist, National Weather Service Pendleton, OR, Forecast Office.

Tsunami

- Chris Jonientz-Trisler, Natural Hazard Program Specialist/Earthquake Program Manager, FEMA Region 10.
- Tim Walsh, Chief Geologist, Washington Department of Natural Resources.
- Brain Atwater, Geologist, U.S. Geological Survey, and Affiliate Professor, Department of Earth and Space Sciences, University of Washington.
- Hal Mofjeld, Oceanographer, National Tsunami Hazard Mitigation Program, NOAA Pacific Marine Environmental Laboratory.
- Aggeliki Barberopoulou, Ph.D. candidate, Department of Earth and Space Sciences, University of Washington.

Volcano

 Chris Jonientz-Trisler, Natural Hazard Program Specialist/Earthquake Program Manager, FEMA Region 10.

- William Scott, Scientist-in-Charge, Cascades Volcano Observatory, U.S. Geological Survey.
- Tim Walsh, Chief Geologist, Washington Department of Natural Resources.
- Wendy Bohrson, Associate Professor, Department of Geological Sciences, Central Washington University.

Wildland Fire

- Jennifer Flemister, Natural Resource Program Coordinator, Resource Protection Division, Washington Department of Natural Resources.
- Bob Bannon, Natural Resource Program Section Administrator, Resource Protection Division, Washington Department of Natural Resources.
- Barbara Kennedy, Cooperative Fire Specialist, U.S. Forest Service, Region 6.

Involvement of Local Emergency Management Community

The local emergency management community in Washington was invited to participate in the development of this plan.

In September and October 2003, local emergency managers reviewed the first draft of the state plan's risk assessment and the processes used to identify the vulnerable jurisdictions in the Hazard Profiles. Comments and suggestions made by local emergency managers were reviewed and, as appropriate, changes made in the risk assessment.

In February 2004, local emergency managers reviewed and commented on a summary of the state plan. Comments were reviewed and incorporated, as appropriate, into the state plan.

Additionally, the files that make up this plan were posted on the State Emergency Management Division web site in March 2004; the files are updated as work progresses on the plan.